

## XP-002079252

1/1 - (C) WPI / DERWENT  
AN - 90-264363 c35!  
AP - JP890001351 890110  
PR - JP890001351 890110  
TI - Mfr. of porous graphite - by heating silicon carbide in  
atmos. contg. chlorine  
IW - MANUFACTURE POROUS GRAPHITE HEAT SILICON CARBIDE  
ATMOSPHERE CONTAIN CHLORINE  
PA - (SUME ) SUMITOMO ELECTRIC IND CO  
PN - JP2184511 A 900719 DW9035 000pp  
ORD - 1990-07-19  
IC - C01B31/02 ; C04B35/54  
FS - CPI  
DC - E36 L02  
AB - J02184511 Rigid SiC is thermally treated in an  
atmosphere contg. halogen gas to form porous graphite.  
The thermal treatment temp. is over 1000 deg.C. The  
halogen gas is Cl<sub>2</sub>. The rigid SiC has green density  
over 99%.  
- USE/ADVANTAGE - The porous graphite has high specific  
surface area and high purity. It is used as a fuel cell  
electrode, catalyst support or as active carbon.  
- In an example, SiC thin film (thickness = 100 microns)  
is formed on a carbon substrate by thermal CVD method  
using silane and methane as source gas. Then it is  
heated at 600 deg.C and thermally treated at 1500 deg.C  
for 10 hrs in N<sub>2</sub> gas contg. Cl<sub>2</sub> gas (Cl<sub>2</sub>/N<sub>2</sub>=0.1/1). The  
obtained graphite has density of 0.95g/cm<sup>3</sup> and specific  
surface area of 900 m<sup>2</sup>/g. (4pp Dwg.No.0.4)